A new subspecies of Lappet-faced Vulture *Torgos tracheliotus* from the Negev Desert, Israel

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The difference in appearance between the Lappet-faced Vulture *Torgos** *tracheliotus* of the relatively recently discovered Negev population and the African birds is so pronounced that we decided to investigate the taxonomic status of this new population.

The Lappet-faced Vulture was first described as *Vultur tracheliotus* by J. R. Forster (*in* Levaillant (1791): *Reise Innere Afrika,* Vol. 3: 363, pl. 12): type locality, Cape Colony, South Africa. In 1829 H. Smith (*in* Griffith's (1829) *Animal Kingdom* 6: 164) described the northern population from Nubia (Sudan) as *Vultur nubicus*. It was said to lack the ear-lappets so characteristic of the birds found further south. The border between the 2 populations (now *T. t. tracheliotus* and *T. t. nubicus*) is, for unclear reasons, usually given as being the Zambezi River (Friedmann 1930), but our investigation indicates that both the distinguishing features of, as well as the border between, the 2 previously described subspecies have been erroneously stated in the past.

Meinertzhagen (1930) pointed to the probable cause of the confusion. He states: "A narrow fold of skin, about a quarter of an inch wide and four inches long, runs from in front of the ear down the neck and forms a type of lappet – a feature which almost disappears in dried skins." Later, he comments: "If dried skins are examined, these lappets cannot be found as they shrivel up. But out of the many hundreds of birds seen alive in Egypt, not one could be said to be devoid of lappets." Hence the size of the lappets, as well as their actual colour, cannot be ascertained from examining skins, which will invariably lead to the conclusion that *T. t. nubicus,* the subspecies without lappets, is found throughout the species' range. The fading and shrinking of the wattles in dried specimens presumably is the reason why *nubicus* has not been recognized in most recent publications.

Examination of 49 skins at The American Museum of Natural History (AMNH), the National Museum of Natural History, the Field Museum, the British Museum (Natural History), the Tel Aviv University and the Giza Zoo indeed reveal that even remnants of lappets are very rare, even in South African birds. The colour of the head and neck in the specimens varies from pale orange to (most commonly) pale brownish, very different from the vivid colours of most live birds. There was, however, a difference, not invariable, in the colour of the thighs of the adult birds (which are best distinguished from immatures by the lack of down on the head). All immatures have brown thighs but in the adults of African origin the colour is found to vary. Of 26 adults skins from Ethiopia, Somalia, Kenya, Uganda, South Africa and Angola and 2 from the southernmost part of Sudan only 2 had brown thighs, all the others having cream or white thighs. A photograph of an adult bird from Rhodesia (P. F. Mundy) as well as 3 from Kenya (B. Bruun and H. Mendelssohn) show white thighs. In contrast 10 adult skins from Egypt

**Torgos* is considered by some to be a synonym of *Aegypius;* e.g. Stresemann and Amadon in Mayr & Cottrell: *Checklist of Birds of the World* Vol. I (revised) 1979: 307–309; Amadon in *Condor* 79 (1977): 413–416.

and northern Sudan revealed only 2 with cream coloured thighs, the remainder having brown thighs. The overall plumage colour in this latter group, in contrast with the thighs, appeared somewhat paler.

Examination of 7 live birds from Kenya (6 in the Baltimore Zoo and one in the Giza Zoo) revealed large lappets, bright red head and white or cream thighs in all. A single live bird from Egypt in the Regent's Park Zoo, London, revealed a pink head, definite but somewhat smaller lappets and brown thighs. Measurements did not significantly differ in the 2 groups when either specimens or live birds were measured.

It thus appeares that the two subspecies *T. t. tracheliotus* and *T. t. nubicus* can best be separated by the thigh colour of the adult (white to cream in nominate *tracheliotus,* brown in *nubicus*), size of lappets (very large in *tracheliotus,* somewhat smaller but quite distinct, in *nubicus*) and colour of head (bright red in *tracheliotus,* pink in *nubicus*).

If these distinguishing characteristics are used it is found that the border between the two subspecies lies in Sudan at about 15°N (if thigh colour alone is considered) or in Somalia and Ethiopia at about 8°N (if field descriptions are primarily relied upon), but certainly not at the Zambezi River almost 1500 miles further south as the vulture flies.

Fuertes' illustration of a Lappet-faced Vulture from Ethiopia (from either a live bird or a freshly killed specimen) clearly shows the enormous lappets and bright red colours of head and neck so characteristic of nominate *tracheliotus* (Fuertes 1930), while the Somalia birds (Archer & Godman 1937) appear to be of the nominate race as they have white or cream thighs and are said to have livid red heads and necks. However, the statement that they lack lappets below the ears is most puzzling and requires clarification.

In West Africa this is a scarce vulture (Bannerman 1930) and scant data exist. Pending further information, West African birds may be assigned to nominate *tracheliotus*.

Examination of the Negev birds shows significant differences from both of the African subspecies great enough to justify separation of this population as a distinct, new subspecies. This may be called:

Torgos tracheliotus negevensis, subsp. nov.

Type: male AMNH # 824179; collected by Heinrich Mendelssohn in northern Negev, Israel, 10 August 1957 as immature: kept in captivity in Tel Aviv until its death 27 May 1979.

Diagnosis: Differs from all races of *T. tracheliotus* by having greyish-brown head with pink nape and only, even in live birds, the smallest vestige of lappets. A thick covering of down on the head persists in the adult of *negevensis* in contrast to the almost completely naked heads of adults of both *tracheliotus* and *nubicus*. The thighs of adults are dark brown or brown, never light brown (*nubicus*) or white (*tracheliotus*). The colour of the back and upper wings is paler brown than in *nubicus*, which in turn is not as dark as in *tracheliotus*. Immatures less than 1–2 years of age cannot with certainty be distinguished from the other 2 subspecies, but after that age the head and neck of both *tracheliotus* and *nubicus* are pink or red, whereas *negevensis* remains greyish brown. Immatures of all 3 subspecies have brown or dark brown thighs.

Measurements: Although *negevensis* to us appeared larger than the other 2 subspecies, measurements have failed to confirm this.

Range: The only known breeding population is found in the southern part of the Negev Desert in Israel.

Remarks: It will be evident that *nubicus* is to some extent intermediate between the southern nominate *tracheliotus* and the northern *negevensis*. The latter however is the most distinct of all populations of the species. In the field it is strikingly different from its African counterpart, closely resembling the Cinereous Vulture *Aegypius monachus* and best distinguished by the one or two faint bands of light brown along the underwing coverts. The feet of the Lappet-faced Vulture are lead grey, but yellow in the Cinereous Vulture. From above, some contrast between the upperwing-coverts and the darker flight feathers is noticeable in the Lappet-faced Vulture. The Lappet-faced Vulture is best distinguished from the Griffon Vulture *Gyps fulvus* by its larger size, darker colour and flat silhouette when soaring (the Griffon Vulture soars with wings in a shallow V), and only slight, as opposed to very strong, contrast between the upper wing-coverts and the darker flight feathers. The redness present on the nape of the Negev birds during courtship or excitement is often not distinguishable in the field, and the head may look uniformly pale brown.

History: The first indication of a population existing in the Negev occurred in 1938 when Dr. Rodenko, a Russian medical doctor who practiced in Jaffa, shot an immature bird at Nebi Nussa near Jericho. The skin was brought to the taxidermist associated with H.M., who noted the lack of skin folds in this bird; but the first seen by H.M. in nature were during an expedition to the Negev in 1945 (an expedition that was without permission, H.M. finishing up in prison), when the Lappet-faced Vulture was common. H.M. was impressed by the large numbers of their huge nests, which were conspicuous features of the landscape of the Arava Valley. At that time, there were not many herds of goats, but there were many gazelles on which the Lappet-faced Vultures might have been feeding. In 1946 Hardy (1947) obtained a Lappet-faced Vulture that had been caught in a jackal trap near Nurnub, southeast of Beer Sheba. It was for a time housed in H.M.'s small zoo in Tel Aviv, and later sent to the London Zoo, where it was on display until its death in 1971. Since then our knowledge of the Lappet-faced Vultures in the Negev has greatly increased, but has unfortunately coincided with a marked decrease in the population. In 1975 only 6 nesting pairs were found, and in 1979 only 4, of which only 3 were able to produce young. Nests are conspicuous in trees in the wadis, and it is unlikely that recent counts have underestimated to any degree. The cause of this decline is not clear. Pellets found near the nests indicate that the main food is goat carcasses, yet despite a great increase in the goat population during the last 10 years, the Lappet-faced Vulture population has declined. Recently however, the Israeli government decided to urge the Bedouins to reduce their herds because the over-grazing was destroying the natural habitats and the southern Negev, where most of the Lappet-faced Vultures nest, is one of the areas in which herds of goats were almost completely eliminated. So, at the present time at least, the Lappet-faced Vultures have been deprived of their main food. The Israel Nature Reserves Authority supply some food, but only once a week, which is not enough to rear the nestling, though recently feeding has been intensified, aided by funds from the World Wildlife Fund. Young birds spend about 6 months with their parents, but then leave the area and disperse, apparently

scattering over a large area such as Arabia (Courtenay-Thompson 1972, Gallagher 1967, Warr 1978), in which they are not offered any kind of protection, and being so conspicuous have little chance of surviving to maturity. In the Negev only adult birds are seen, with their young of that year, but no immatures. Formerly, when the population was larger, immature birds occurred in the Jordan Valley as far north as Jericho and in the western Negev, where some (or perhaps many) died by feeding on thallium poisoned rodents (Mendelssohn 1975).

The Negev population of the Lappet-faced Vulture at present consists of probably less than a score of birds. The Tel Aviv University, under the directorship of H.M., has initiated a captive breeding programme on the basis of 4 birds, 3 of which are 4 years old and the fourth an adult which was found in 1978 with an injured wing. Such a captive breeding programme may be the only way of saving this subspecies from extinction.

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Nineteenth Century bird records from Tristan da Cunha

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At the beginning of the 19th century Tristan da Cunha was the most important breeding-place for seabirds in the temperate South Atlantic. It also had 3 highly-distinct landbirds: a flightless moorhen *Gallinula nesiotis,* a thrush *Nesocichla eremita,* and a bunting *Nesospiza acunhae.* By the end of the century the moorhen, the bunting, and breeding by 2 of the largest seabirds, the Wandering Albatross *Diomedea exulans* and a giant petrel *Macronectes* sp., had been recorded for the last time, while many of the other birds had become